

FINAL DETERMINATION

Kentucky Electric Steel, Incorporated has applied to the Kentucky Division for Air Quality for a Title V permit to operate a rolled bar steel manufacturing plant, located in Boyd County, Kentucky. The plant is a Title V source because the potential emissions of PM₁₀, SO₂, NO_x, and CO exceed the major source threshold.

A preliminary determination was made to approve the permit and a public notice was placed in the Daily Independent-Ashland, on January 11, 1999. The Division received comments from Kentucky Electric Steel on February 3, 1999, and March 10, 1999. All comments were addressed and a copy of the comments and responses is attached. See Attachment-B. No comments were received from the public, affected states, or EPA. The following permit revisions were made:

- a. Since the melt shop has an allowable for lead emissions, then it should be subject to the Existing sources emitting toxic air pollutants 401KAR63:021, and not 63:022, the New toxic regulation. The change is reflected in the final permit.
- b. Since the issuance of the draft permit, 401 KAR 59:570 - Standards of performance for steel plants: electric arc furnaces constructed after October 21, 1974, and on or before August 17, 1983, 40 CFR 60, Subpart AA, has been amended. All the applicable amendments have been reflected in the final permit.
- c. Emission point 5(4), the continuous caster was constructed in 1968. The permit writer thought the caster was modified in 1995, and stated that the caster is subject to 401 KAR 59:010, New process operations. However, after a further review, it was determined that Kentucky Electric Steel did not exceed the capital expenditure limit to trigger a modification. Therefore, the caster will be subject to 401KAR61:020, Existing process operation. Since the opacity allowable has increased from 20% to 40%, the permit writer change the frequency of monitoring opacity from weekly to monthly.
- d. The four reheat furnace tanks were added to the list of insignificant activities.
- e. The draft permit erroneously stated that the steel production from the two electric arc furnaces was limited to avoid the applicability of 401KAR51:017, Prevention of Significant Deterioration(PSD). After further review the permit writer found out that the steel production was limited to avoid the applicability of 401KAR51:052, Review of new sources in or impacting upon nonattainment areas.
- f. After further investigation the permit writer thought daily opacity observation of the dust handling equipment is too stringent, and decided to relax it to weekly.
- g. Kentucky Electric Steel has requested to revise the reporting period for the non-emission related deviations from permit conditions to be reported within 7 days instead of 3 days. The permit writer thought the 3 days requirement is too stringent and allowed the 7 days reporting period.
- h. Section H- Compliance Schedule, will be removed from the final permit, because Kentucky Electric Steel has complied with all the requirements.

In conclusion, a thorough analysis has been made of all relevant information available which pertains to this application. The division has concluded that compliance with the terms of the permit will ensure compliance with all applicable air quality regulations and requirements. Therefore, it is recommended that the permit be issued as conditioned.

RESPONSE TO COMMENTS RECEIVED ON February 3, 1999.

The comments are being addressed according to their respective item numbers on the comments submittal. The comments are attached to the responses in this appendix.

Response to comment # 1:

Kentucky Electric Steel (KES) is an existing major source, therefore it should be subject to Regulation 401 KAR 63:021, Existing sources emitting toxic air pollutants. The lead emissions allowable requires KES to keep the baghouse in operation to ensure continuous compliance. The final permit will show Regulation 63:021 instead of 63:022 as the applicable regulation to emission unit 2.

Response to comment # 2:

The Division will incorporate all relevant changes that were made to Supart AA in the final permit.

Response to comment # 3:

The Division agrees with KES that the final permit shall specify Reference Method 9 as the applicable method for monitoring opacity.

Response to comment # 4:

Please refer to comment # 1 response.

Response to comment # 5:

That language was inadvertently removed, and will be reinstated in the final permit.

Response to comment # 6, 7, 8, 9, 10, 11, and 16:

The Division will incorporate all the relevant changes that were made to Subpart AA in the final permit.

Response to comment # 12:

This language is included in the permit as a result of periodic monitoring that was requested by the U.S.EPA. Note that all visible emissions are monitored using Reference Method 9. However, if KES had an opacity exceedance during the first six months of monitoring, then KES will be required to continue monitoring opacity based on daily basis until a six months monitoring period free of any opacity exceedances has been achieved. Only then, KES will be allowed to cut down the frequency of opacity monitoring to weekly basis. Any opacity exceedances shall be reported to the Ashland field office in the semiannual report.

Moreover, this comment will be addressed again under "additional comments submitted on March 10, 1999".

Response to comment # 13:

Please refer to comment # 12 response.

Response to comment # 14:

That language can not be used , because of the nature of the melt shop.

Response to comment # 15:

This is the result of the periodic monitoring requirements that the U.S.EPA has instituted.

Response to comment # 17:

The final permit will change that entry so it would read, "Construction commenced: 1968". This comment will be addressed in detail under "additional comments submitted on March 10, 1999".

Response to comment # 18:

This comment will be addressed with other comments that were received on March 10, 1999.

Response to comment # 19 and 20:

Please refer to comment # 12 response. Furthermore, these comments will be addressed again later under additional comments received on March 10, 1999.

Response to comment # 21:

The rehear furnace tanks are considered insignificant activities and will show up in the final permit under Section C.

Response to comment # 22:

Reference Method 9 is the only acceptable method for determining opacity emissions.

Response to comment # 23:

There are more than one Reference Method to test Nitrogen oxides emissions.

Response to comment # 24:

EPA requested that the Division defines the word "promptly". The Division believes that three days is enough time for a facility to notify the Regional Office in case of violating the permit conditions.

Response to comment # 25:

It means that this Title V permit will be the only valid permit.

Response to comment # 26:

Yes, June 21, 1999, is an applicable date.

RESPONSE TO ADDITIONAL COMMENTS RECEIVED ON MARCH 19, 1999.

The Division will only respond to any comment that was not addressed under the February 3, 1999 submittal.

Kentucky Electric Steel (KES) would like to know why the permit limited the LMF capacity to 150 tph.

The Division used the 150 tph as a limit, because the original permit application had 150 tph for the LMF capacity.

KES requests that parentheticals should be removed (i.e. Limit is not self imposed to preclude PSD requirements)

After further review of old permits and memos, the Division concluded that the steel production limits were stated on the permit to preclude the applicability of Regulation 401KAR51:052, Review of new sources in or impacting upon nonattainment areas. This change will be reflected in the final permit.

KES states: Steel production limits for each furnace have no regulatory basis.

Please refer to the preceding comment.

KES requests that language be included clarifying the distinction between the furnaces and the LMF.

The Division will revise the permit to show that Subpart AA is not applicable to the LMF.

KES requests clarification regarding compliance mechanisms related to lead emission requirements.

The Division requests KES to use the following equation to monitor lead emissions:

$$\text{Emissions of (Pb) in lbs/hr} = \frac{[\text{Process rate (tons/day)} \times \text{KEIS emission factor (lbs/ton)}]}{[\text{Hours of operation per day}]}$$

Excluding NSPS requirements for baghouse opacity observations KES can not find any regulatory basis for included opacity observations and request that these requirements be removed. If this request is not honored then clarification is requested regarding “rolling calender” and specific requirements.

The permit will be revised to comply with the new amendments to Subpart AA. However, the Visible emission observations of the operation of dust handling equipment of the baghouse that were requested to be performed on daily basis will be revised to be performed on weekly basis.

KES requests clarification of modification date for the Continuous Caster (i.e. definition of modification 50:010)

The three strands caster was installed in 1968 with a 90 tph capacity. KES added a fourth strand to the caster in 1995 which increased the capacity to 120 tph. KES argues that no “capital expenditure” accompanied the addition of the fourth strand, therefore in accordance with the latest definition of the word “modification” in regulation 50:010, the fourth strand addition should not be considered as a modification. The Division agrees with KES and will revise the permit to state Regulation 401KAR61:020, as the applicable regulation to the caster. Of course, the PM allowable will change accordingly.

KES requests that 403,200 ton/yr limitation be removed as a an operating limit for the continuous caster.

Since the operation of the continuous caster is tied to the production rates of the two EAFs, it seems logical to limit the caster to 403,200 tons/yr, which is the allowable for the two EAFs.

KES requests that any emission limitation for the continuous caster be regulatory based.

The continuous caster is subject to Regulation 401KAR61:020, Existing process operations. This regulation determines allowables based on process weight. The definition of process weight according to the regulation is: **“The total weight of all materials introduced into any affected**

facility which may cause any emission of particulate matter, but does not include liquid and gaseous fuels charged, combustion air, or uncombined water”.

The key word here is **may** cause any emission of particulate matter.

Assume all 120 tph may cause PM emissions. The regulation will give an allowable of 53.126 lbs/hr, and 232.693 tons/yr.

If KES is allowed to emit 232.7 tons/yr of PM, every one in the vicinity of KES will be dead.

Not to mention KES will be out of business. A more realistic assumption for the process weight is 2% of the 120 tons/hr, which is equal to 2.4 tons/hr. Using the 2.4 tph process weight, the regulation will give an allowable of 7.37 lbs/hr, and 32.285 tons/yr. Although, the number seems high, it is more environmentally sound..

The opacity limit will be changed from 20% to 40%, because the caster is subject to the existing process operations.

KES can not find any regulatory basis for weekly opacity observations and requests that this language be modified to require monthly observations.

US.EPA periodic monitoring requirements is the regulatory basis. However, since the opacity allowable has been changed from 20% to 40%, the Division will revise the final permit to require opacity observation be performed on monthly basis.

KES requests clarification of raw materials under emission unit 7-Slag handling and material transfer.

The permit refers to slag handling to processing, crushing, and storage. The permit will be revised to state Emission unit 7 as Slag handling and processing.

Under Section F- Monitoring, Record Keeping, and Reporting requirements, KES requests that 6b be modified to reflect (14) days.

The Division reviewed your request and decided to change the reporting duration from three (3) days to seven (7) days.

Under Section H- Compliance Schedule, KES requests that this section be removed.

If all the requirements of this section have been achieved, the Division will remove this section from the final permit.

KES requests that limitations, specific monitoring requirements, record keeping requirements and reporting requirements be modified to include all available options in Federal Register : March 2, 1999 (Volume 64, Number 40).

The permit will be revised to include all the available options in the amended Subpart.